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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,345	11/27/2000	Jean-Pierre Ferray	MATR-0002-US	5978

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EXAMINER

LELE, TANMAY S

ART UNIT PAPER NUMBER

2684

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/723,345

Applicant(s)

FERRAY, JEAN-PIERRE

Examiner

Tanmay S Lele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Response to Arguments

1. Applicant's arguments filed 28 July 03 have been fully considered but they are not persuasive.

2. In response to applicant's argument that "Harjula is actually teaching the one with ordinary skills in the art away from the teaching of the invention," a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claims 1 – 8, Applicant attempts to overcome the rejection by stating, "to the contrary, Harjula et al. discloses that handover must be performed rapidly to prevent interruption of the communication (see page 8, lines 5-7)," and further "Harjula et al. is actually teaching the one with ordinary skills in the art away from the teaching of the invention." Even though Harjula's teachings relate to a handover in a rail system, they meet the currently claimed limitations of, "wherein the feeder means further have means for applying at least part of the second radio frequency signals on the first cable run" (as cited in the previous Office Action, paper number 5, page 3; specifically page 8, paragraph 1). Note that as the frequency channels are the same, at least part of the second frequency signal (which is the same as the first) would obviously be applied to the first cable (as well as the opposite), as the frequency channels are the same. Hence, because the Examiner is required to interpret the claims in the broadest reasonable

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manner under current examining practice, the Examiner is not persuaded by the Applicant's arguments suggesting that the reference cannot be properly combined with the other references made of record by the Examiner.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "[Actually, Harjula et al. neither discloses nor suggests the feature of the claimed invention] wherein, to avoid loss of the radio communication while leaving, at least part of the radio frequency signals from a given base station are fed to the cable run extending from the other base station") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In further regards to claims 1 – 8, Applicant attempts to overcome the rejection by stating, "Harjula et al. neither discloses nor suggests the feature of the claimed invention wherein, to avoid loss of the radio communication while leaving, at least part of the radio frequency signals from a given base station are fed to the cable run extending from the other base station." Note that these limitations were not specifically stated in the claimed. Note further, as cited above, Harjula does indeed disclose and suggest the prevention of radio communication, as when a mobile moves on a rail, communication would be prevented from being lost. Harjula, when viewed with Lowdon for the cited motivation, teach of preventing lost connection by supplying similar signals on different cables. Hence, Examiner is not persuaded by Applicant's argument that the references, do not teach or recite the currently claimed, when combined for the cited motivation.

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4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claims 1 – 8, Applicant attempts to overcome the rejection by stating, "Therefore, there can be no suggestion or motivation to combine Lowdon and Harjula." As stated above, Harjula did teach or recite the claimed (when viewed with Lowdon) and did not teach away from the claimed as recited. Hence, because the Examiner is required to interpret the claims in the broadest reasonable manner under current examining practice, the Examiner is not persuaded by the Applicant's arguments suggesting that the reference cannot be properly combined with the other references made of record by the Examiner.

(Note the following is a copy of the rejection presented in paper number 6)

DETAILED ACTION

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowdon (Lowdon, US Patent 6,073,019) in view of Harjula et al. (Harjula, WIPO, WO 98/35511).

Regarding claim 1, Lowdon teaches of a mobile communication system, comprising runs of loss cable disposed in succession along a zone of radio coverage and feeder means for feeding the cable runs from base stations of at least one cellular mobile communication network (as seen in Figure 1), wherein the feeder means have means for applying first radio frequency signals from a first base station of the cellular mobile communication network to a first cable run (column 1, lines 44 – 54; note that all fields, signals, and frequencies are all EM waves and thus synonymous with one another), and means for applying second radio frequency signals from a second base station of the cellular mobile communication network to a second cable run (column 1, lines 44 – 54; note that all fields, signals, and frequencies are all EM waves and thus synonymous with one another), which is adjacent to the first run (as seen in Figure 1 and column 1, lines 44 – 54).

Lowdon does not specifically teach of wherein the feeder means further have means for applying at least part of the second radio frequency signals to the first cable run.

In a related art dealing with handover in a rail environment, Harjula teaches of wherein the feeder means further have means for applying at least part of the second radio frequency signals to the first cable run (page 8, paragraph 1).

It would have been obvious to one skilled in the art at the time of invention to have combined Lowdon's underground mobile communication system with Harjula's frequency reuse, for the purpose of facilitating handover in a fast moving railway system, as taught by Harjula.

Regarding claim 2, Lowdon in view of Harjula, teach all the claimed limitations as recited in claim 1. Lowdon further teaches of wherein said part of the second radio frequency signals is applied to the first cable run with a given attenuation relative to the first radio

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frequency signals as applied to the first cable run (as seen in Figures 1 and 2 and starting column 2, line 64 and ending column 3, line 8).

Regarding claim 3, Lowdon in view of Harjula teach all the all the claimed limitations as recited in claim 1. Lowdon further teaches of wherein the feeder means further have means for applying at least part of the first radio frequency signals to the second cable run with a given attenuation relative to the second radio frequency signals as applied to the second cable run (as seen in Figures 1 and 2 starting column 2, line 64 and ending column 3, line 8; note the directions A and B).

Regarding claim 4, Lowdon in view of Harjula teach all the claimed limitations as recited in claim 1. Harjula further teaches of wherein all the second radio frequency signals are applied to the first cable run (page 8, paragraph 1; note that this is obvious as the same frequency channel is reserved for the next BTS).

Regarding claim 5, Lowdon in view of Harjula teach all the claimed limitations as recited in claim 1. Both Lowdon and Harjula further teach of wherein the part of the second radio frequency signals applied to the first cable run is limited to a frequency carrying a beacon signal from the second base station (Lowdon: column 1, lines 55 – 65 and Harjula: page 8, paragraph 3; note both are mobile assisted handovers and a control channel from the BTS such as the SACCH is well known in the art).

Regarding claim 6, Lowdon in view of Harjula teach all the claimed limitations as recited in claim 1. Lowdon further teaches that wherein the feeder means are set up to apply the radio frequency signals from at least one of the first and second base stations to several adjacent cable runs (as seen in Figure 1 with the over lap in cable runs).

Regarding claim 7, Lowdon in view of Harjula teach all the claimed limitations as recited in claim 1. Harjula further teaches of further having collection means to collect radio signals picked up by the runs of loss cable (starting page 7, paragraph 6 and ending page 8; note that the cables serve as antennas and thus both radiate and receive by reciprocity and thus are obviously collection means), wherein the collection means have means for applying third radio frequency signals from the first cable run to the first base station and means for applying at least part of the third radio frequency signals to the second base station (page 8, paragraph 1 and page 9, paragraphs 1 – 3; note the system allows for multiple mobiles and thus third, fourth, ect signals are obvious as well as their transmission and reception on multiple cables as described by Harjula).

Regarding claim 8, Lowdon and Harjula teach all the claimed limitations as recited in claim 1. Lowdon and Harjula further teach that wherein the runs of loss cable extend through tunnels (Lowdon: Figure 1 and column 2, lines 43 – 63 and Harjula: Figure 1 and paragraph 5) and Harjula further teaches wherein the feeder means are positioned outside the tunnels (page 11, paragraph 2).

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Inventor	Publication	Number	Disclosure
Chung et al.	US Patent	6,359,871	Cellular Communications Network
Lowdon	US Patent	5,974,326	System and Method for Channel Allocation in a Radio Telephone System for an Underground Railway
Stolarczyk	US Patent	4,777,652	Radio Communication System

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			for Underground Mines
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Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

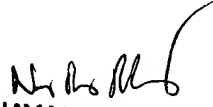
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


Tanmay S Lele
Examiner
Art Unit 2684

tsl
September 28, 2003


NAY MAUNG
SUPERVISORY PATENT EXAMINER